

Remarks

Claims 1, 4-6, and 11-13 have been amended herein, and claims 1-7 and 11-14 are currently pending. Reconsideration of this application in view of the above-noted amendments and the following remarks is respectfully requested.

35 U.S.C. 112 – Claims 1-4, 6, 11-13

Claims 1, 5-6, and 11-12 have been amended to address the Examiner's claim rejections pursuant to 35 U.S.C. §112, and to improve clarity as well as antecedent basis. Claims 4 and 13 have been amended solely to clarify antecedent basis. Support for the term "support panel connector means" as used throughout the presently amended claims (including previously presented claims 2 and 3) is found throughout the specification as originally filed, for example in original claims 1 and 11, at line 18 of page 20, and at line 16 of page 21. No new matter has been added by way of the present amendments to the claims.

35 U.S.C. 102 (b) - Claims 1-7 and 11-14

Claims 1-7, 11, 13 and 14 were rejected under 35 U.S.C. §102(b) as being anticipated by the disclosure of Piccone in U.S. patent no. 5,740,648 ("Piccone '648"), and claims 1-7 and 11-14 were rejected under 35 U.S.C. §102(b) as being anticipated by the disclosure of Lanc in U.S. patent no. 6,167,669 ("Lanc '669"). To the extent that either of these rejections is maintained with respect to the presently amended claims, the Applicant traverses.

In order for a reference to anticipate a claim, it must either expressly or inherently teach all of the limitations of the claimed invention. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP 2131. As presently amended, independent claims 1 and 11, and the claims that depend therefrom are, respectively, directed to stay-in-place formwork for casting vertical concrete structures, to concrete structures made with and incorporating such formwork, and to kits comprising components thereof. The formwork comprises:

- a plurality of vertically elongate wall panels;
- assembled together in a vertical orientation and interconnected in edge-to-edge relationship *via* cooperative elongate wall interconnection means along each of the longitudinal edges of the wall panels ;
- to define a perimeter wall of formwork assembly; and,
- a plurality of inner support panels disposed entirely within the wall and interconnected with the wall panels;
- at selected suitable intervals;
- *via* the co-operative interconnection of connector means provided along the edges of the support panels and complementary support panel connector means provided on the inward-facing surface of the wall panels.

Each of the wall panels of the claimed formwork are elongate in the vertical orientation, and are suitably configured so as to be joined to one another (directly or *via* clips) to form a perimeter wall, and separately to be held in spaced-apart relationship by perforated support panels that are attached (by support panel connector means) to the interior wall surfaces of the wall panels. The support panels perform the wall-tensioning functions of the connector panels of prior art stay-in-place formwork for casting vertical concrete structures, but since the support panels are disposed entirely within the perimeter wall, the support panels do not also function to join adjacent inner or adjacent outer wall panels to one another, and may accordingly be located at any desired position within the interior of the formwork assembly. As is discussed in detail at pages 2-4 of the present description, this considerably simplifies the construction of an assembly of the claimed formwork, while still maintaining a desired regular interval between internal support for the vertically elongate wall panels.

Neither Piccone '648 nor Lanc '669 describe nor suggest stay-in-place formwork for assembly together in a vertical orientation in which the wall panels are joined together to form a perimeter wall in which the inner support panels are disposed entirely within the perimeter wall. To the contrary, Piccone '648 provides a suitable representative example of a cell-based (or "cellular") prior-known modular formwork system. As is described in detail at pages 2-4 of the present specification, this cellular configuration may complicate the assembly of the formwork, especially in situations where variations in the dimensions of the concrete structure are

contemplated. The cellular configuration may also in some cases contribute to undesirable distortion of the resulting concrete structure.

Furthermore, as is discussed in detail at pages 4-5 of the present specification, since the wall panels of prior-known cellular formwork assemblies are joined together by means of connectors that interconnect with the wall panels along their edges, the horizontal width of each cell is defined mainly by the width of the inner and outer wall panels, but also by at least a portion of the thickness of the corresponding connectors at either end. Any two adjoining cells of a prior-known cellular formwork assembly will accordingly have a total horizontal width being the sum of: (a) the width of two adjacent wall panels, plus (b) the thickness of the connector between the cells, plus (c) at least a portion of the thickness of the connectors at either end of the two-cell structure. In other words, assuming wall panels of uniform dimensions and connectors of uniform thickness, the total length of a formwork wall divided by the number of cells in that wall gives a resultant cell width that exceeds the width of a wall panel by something in excess of the thickness of a connector, the "something in excess" varying depending upon the number of cells. Since the horizontal extension of each given cell of a prior known cellular formwork assembly is defined not only by the width of the corresponding inner and outer wall panels of that cell but also by at least a portion of the thickness of the associated connectors at either end, and since the connectors also act as tensioning panels, it may be difficult to locate the internal auxiliary tensioning panels (braces) of such formwork at precisely even distances from the connectors at either end and from one another along the width of a cell. As a result, it may be difficult to maintain an even spacing between the connectors and the tensioning panels within a given cell of prior-known cellular formwork, especially if both tensioning panels that are associated with connectors and independent tensioning panels are present in a given cell.

Consequently, since the disclosure of Piccone '648 teaches a cellular formwork assembly of the sort wherein the support panels function, in part, to join adjacent inner and adjacent outer wall panels to one another, the disclosure of Piccone '648 can not properly be understood to disclose or suggest "a perimeter wall of formwork assembly" in which a plurality of inner support panels "is disposed entirely within the perimeter wall".

Lanc '669 similarly can not properly be understood to disclose or suggest "vertically elongate wall panels assembled together in a vertical orientation and interconnected in edge-to-edge relationship *via* cooperative elongate wall interconnection means along each of the longitudinal edges of the wall panels to define a perimeter wall of formwork assembly". To the contrary, Lanc '669 discloses transparent "Concrete Plastic Units" (CPUs) that are elongate in the horizontal orientation and may be stacked on top of one another in horizontal courses: see, for example, the abstract, and column 13, lines 32-35. At column 8, lines 1-15, Lanc '669 specifically teaches away from the use of vertically elongate wall panels, stating at lines 1-5 that it is an object of the CPU "to provide a clear permanent concrete form, that is installed horizontally, to solve the problem, of installing horizontal steel. By placing the forms on a horizontal plane it is possible to install reinforcing steel, in any course, so that the steel is bent around the corners... [sic]".

Furthermore, contrary to the Examiner's suggestion, Lanc '669 can not properly be understood to disclose the interconnection of wall panels and support panels at "selected suitable intervals" to promote the proportionality and scalability of the assembly, such that desired variations in the thickness or other dimensions of the concrete structure may be accommodated without corrupting the regularity of support, and without requiring the creation and use of multiple unique individual components. Instead, Lanc '669 contemplates the cutting-to-shape of CPUs to accommodate desired variations, stating at column 8, lines 10-12 that "Another advantage of installing the units horizontally is the ability to be able to cut the units both horizontally and vertically, on site.".

In view of the current amendments made in response to the Examiner's rejections and to clarify the subject matter for which an exclusive property or privilege is claimed, the applicant respectfully submits that neither Piccone '648 nor Lanc '669 disclose nor suggest, neither explicitly nor implicitly, the subject matter as presently claimed. The applicant therefore respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) with respect to Piccone '648 and with respect to Lanc '669 should be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, the Applicant believes the pending claims to be in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If any issues remain or if the Examiner believes a telephone conference would expedite the prosecution of this application, the Applicant respectfully requests a telephonic interview prior to the preparation of any written Office Action.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 50-4035. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-4035.

Respectfully submitted,
LANG MICHENER LLP

By:


Keith Bird
Registration No. 57,088

Enclosures:

- Petition for Extension (three months)
- Request for Continued Examination (RCE)